

REMARKS

Claims 1-6 are pending. The title has been amended and new claims 4-6 are added.

Claims 1-3 were rejected under 35 U.S.C. §103(a) as being unpatentable over Miki et al. in view of Miyake. This rejection is respectfully traversed.

Claim 1 includes a feature of a capacitor storage electrode formed on an inside wall and a bottom of the opening and electrically connected to the first diffused layer. Claim 1 defines the opening as formed in the insulation film (“an insulation film covering a top of the memory cell transistor and having a through-hole opened on the first diffused layer and an opening surrounding the through-hole”). The capacitance of the capacitor can be increased by use of the inside wall of the opening. According to the present invention, the capacitance of the capacitor can be increased by increasing the depth of the opening.

The Examiner considers Miki et al. as providing an opening in the layer (603) surrounding the through-hole. However, this opening is formed in the dielectric layer 603, not the insulation film as required by the present claims. The bottom electrode 104 of Miki et al. is formed in contact with the inside wall of the opening as shown in Fig. 6. However, the titanium dioxide layer 103 is formed in the opening beneath the bottom electrode 104. Thus, the bottom electrode is not formed on and in contact with the bottom of the opening.

In Miki et al., the dielectric layer 603 is formed so as to prevent interference between the adjacent capacitor and degradation of the dielectric break down voltage. By increasing the thickness of the dielectric layer 603, that is, by increasing the depth of the opening, the capacitance of the capacitor is decreased. Thus, in addition to failing to teach features of the claimed invention, Miki et al. teaches away from the claimed invention in the effect caused by

the depth of the opening. Miki et al. does not teach or suggest the bottom electrode formed on the inside wall and the bottom of the opening as claimed.

Miyake fails to provide the teachings or motivation which Miki et al. lacks. Miyake does not teach or suggest a capacitor storage electrode formed on the inside wall and the bottom of the opening formed in the insulation film as in the present invention.

Accordingly, one of ordinary skill in the art would not have combined the references to obtain the claimed invention. Furthermore, even if the references were combined, the combination fails to teach or suggest the features as claimed.

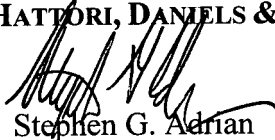
For at least the foregoing reasons, the claimed invention distinguishes over the cited art and defines patentable subject matter. Favorable reconsider is earnestly solicited.

Should the Examiner deem that any further action by Applicants would be desirable to place application in condition for allowance, the Examiner is encouraged to telephone Applicant's undersigned attorney.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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